

# Human addiction to fossil fuels



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The Human Addiction to Fossil Fuels: Converting to Green Energy Is Easier Said Than Done I chose this topic because I hope to pursue a career in a field dealing with the development of renewable energy. I also believe it is a prevalent issue that must be dealt with, or result in unfavorable consequences sooner than people think. This paper showed me that renewable energy is such a large issue that there a plethora of factors to take into account, and the complete conversion to renewable energy may take much more time and effort than people assume.

Exploitation of the earth's resources is inevitably leading to a worldwide power crisis. Energy deficiency is one of the issues on the forefront of the environmental movement. While energy shortages are not yet affecting people, studies show they are imminent if steps are not taken toward prevention. The human race is notoriously known for its ability to exploit resources. One of the most obvious showcases of this unique ability is the exhaustion of nonrenewable resources.

This concept is relatively modern in the sense that human use of these resources has increased exponentially since the discovery of nonrenewable resources as major power generators. Although, the adverse environmental consequences caused by the use of nonrenewable resources is immediately affecting the people. Further progression of nonrenewable resource use also raises questions concerning sustainability of the current human environment. Alarming, research of their depletion and impact on the environment is an even newer concept.

The recent knowledge has given birth to the novel idea of using the earth's natural forces as an efficient, renewable energy source on a large scale.

While these green energy sources are environmentally friendly and prove to be a key factor in the modern energy crisis and sustaining our lifestyle, they are not used universally due to a combination of factors, including consumer awareness, availability of resources, and government policy. Energy In Human History Throughout human history, energy consumption has risen with population increase and new innovations.

The earliest forms of energy were physical; comprised of human and animal labor. This energy type could not yet be consumed on a large scale, only used when needed. Wind and water wheels were the earliest developed mechanical innovations seen by humans, circa 10-70 CE (Armaroli, Balzani, 2010, p. 28). These early forms of energy could not be stored and only performed simple tasks. From that point on, the human race only experienced further mechanization. As the industrial revolution came around, these new innovations were accepted with great success, and little knowledge as to the predicament that had begun.

The progress of energy use can be tracked, as people moved from consuming wood, to coal, to steam, and finally to fossil fuels. Referring to fossil fuels, oil is the one word universally understood regarding resource depletion, although, it is not the only source of energy used. Some other renewable sources our species is consuming at a rate faster than can be replenished are petroleum, coal and many natural gases. As well as depleting the supply, their use has resulted in a large carbon footprint from a substantial amount of pollution and collection of greenhouse gases.

The trend of consuming is to blame for the issue at hand. Economies around the world have utilized their resources to support consumers. Globally, economies either use fossil fuel energy to produce goods suited to the vast group of consumers, or consume energy with the products produced. One great example of this is the invention of the automobile. While the carbon footprint of automobile production is large, the footprint left by consumption during use is even bigger. The popularity of motor vehicles is one of the largest contributing factors to oil use and climate change.

The effects of mass fossil fuel use could prove to be catastrophic if no measures are taken in inhibiting their consumption. Future of Fossil Fuel Use Scientists have predicted that the current rate of fossil fuel use, and its negative environmental contribution, could lead to an increase of average world temperature by 4 degrees Celsius. While it may seem like a small increase, the results could be catastrophic. Humans would not be able to sustain their modern living conditions. The amount of carbon dioxide in the atmosphere would amplify greatly.

Sea levels would rise as the melting of polar ice caps is observed.

Destruction of habitats would be imminent; the Amazon rainforest alone is predicted to suffer a loss of area as high as 83 percent. Climate change could cause more and worse natural disasters, such as wildfires. Climate change could also prove disastrous for agricultural economies as the climates become too dry to properly raise crops. The sociological affect on humans may be even worse. Water scarcity and crop failure could lead to further problems, such as an unstable food source.

Conditions would force people to leave their homes in search of better living, although no place would provide salvation (Honnery, Moriarty, 2011, p. 209). Essentially, human life would become increasingly more difficult due to environmental circumstances. Humans have followed a natural cycle of progression with technology, but have begun to live outside of their means. They are consuming at such a large capacity that not only is it hurting the environment, but also the planet cannot yield the amount of resources for the large demand of products.

Contrary to popular belief, humans are not exempt to natural law. Every species on our planet that has exploited its resources has ceased to exist. Luckily, this dystopian view is assuming that no steps in environmental mitigation would be taken from present time until then. This future is only one possibility out of many. Renewable energy development has already begun, and is being accredited with full potential of converting our power dependency to renewable sources. Green Energy The interest in renewable energy sources has grown greatly with our knowledge of the subject.

Researchers have found that the sources are not only renewable, but also have less of a harmful impact on the environment, and arguably no negative affects whatsoever. The current global warming scare and drive for new clean and sustainable sources of energy fuel the green energy movement. Renewable energy is seen as a way to avoid the environmental consequences of using fossil fuels for energy. Renewable energy sources are capable of significantly lowering pollution levels, as well as lowering green house gas levels and slowing the inevitable global warming (Honnery, Moriarty, 2011, p. 79).

Many people commonly view renewable energy as the transpose of fossil fuels. In fact, it is the opposite in the sense that renewable energy is unlimited, and has virtually no harmful effects to the environment; although, some would debate the claim that there are no negative environmental effects. Renewable energy sources are already seeing speculation of use as a complete alternative to fossil fuel, but it would take large social and technological advancements. Ideally, the environmental movement would see humans convert completely to green energy, a source that would last as long as the natural elements of the earth last.

Negative fossil fuel effects would be reversed; there would be no energy crisis, leaving people of the world to focus on other important issues.

Development of green energy is a considerable step in sustaining the current human way of life for the future. Despite the many obvious benefits of the utopian view, there are still many disadvantages and outside factors preventing large scale use of renewable energy innovations. Consumer Awareness of Green Energy The largest incentive driving any business is money.

While most businesses also have goals in helping better the human race, or their environment for this particular case, they are also trying to make a profit (Chen, 2011, p. 75). In order for a business to make a profit, there must be a demand. Sequentially, in order for a demand to exist, consumers must attain the knowledge to be able to demand. Simply, one will not demand what they don't know exists. The knowledge of the general public on renewable energy is an integral part of developing a widely used green energy system.

The support base for a renewable energy system must be composed of not only developers and environmentalists, but also, more importantly, that of the general public. Gwynne Rogers of the National Renewable Energy Laboratory (NREL) stated that eighty to ninety percent of people agree with the statement “ I care about the use of renewable energy sources” (p. 6). The public contains decent knowledge of the subject of renewable energy and its terms, but a relatively low knowledge of how to get involved. Even when green options are available by power companies, roughly, only 1 in 6 consumers are aware (Rogers, 2011, p. 1). The information shows that, at the moment, there is little profit being made by energy companies with their green energy and offset purchase programs. The community is aware of the environmental benefits of clean energy, but the people lack the knowledge of available options for contribution to the green energy campaign. This indicates there is a large margin for growth of businesses in the market of renewable energy. The consumer’s virtual unawareness and lack of sufficient knowledge gives no monetary incentive to businesses for offering green energy plans.

Until the general consuming public attains adequate information and widely demands and supports renewable energy, both financially and ideologically, it will cease to grow. Public opinion plays a necessary role in the evolution of the green energy movement. Resource Availability The general public may have higher expectations than can be accomplished from renewable energy sources. As Rogers showed, people are generally for the use of green energy. How can one be expected to say they are against a technology that has the potential of saving our planet?

But, without the knowledge of these sources' true feasibility, people may hold their expectations too high. Many people, including experts, misjudge the hardships and realistic amount of time in bringing new technologies onto the renewable energy market (Honnery, Moriarty, 2011, p. 2). While many arguments exist on the potential of renewable energy sources, the fact is that natural renewable energy sources do not yet generate enough power to sustain the human population on their own. The most critical supporting factors are technology and a variance in environment.

The difference in environments has many obvious examples; you can't utilize solar power in places where the sun doesn't shine long enough to generate a significant amount of electricity. There are also many environments that have no major running water source that can provide hydroelectric or wave energy. Coupled with a lack of technology, these environmental factors make it difficult for the growth of green energy. Many agree that there is great potential for solar power, but its current power generation level is subpar to the people's needs.

In a study by Francis Chen (2011), 11.5 terawatts of power from only wind, water and solar power would need to be generated by year 2030 to meet human energy demands. Solar power alone would need to generate 4.6 terawatts of power. This would require 89,000 300-megawatt power plants and 1.7 billion rooftop solar collectors. Thus far, more than ninety-nine percent of the installations needed have yet to be built (p. 108). There is also a technological obstacle involving storage of gathered energy.



At the moment, people lack the technology for long-term storage plants compatible with renewable energy sources. This signifies that every electron must be used at the time it is generated (Fuchs, Masoum, 2011, p. 4). Many barriers in technology stand in the way of renewable energy becoming the human race's main source of energy consumption. As it is, fossil fuel consumption produces more than the current renewable sources have the power to. This fact alone makes it difficult to switch to renewable sources of energy. Government Policy

Government policy is one more barrier that the green movement must surpass in order to reach its full potential. Economic and monetary influence on environmental policy is significant; monetary incentive is a powerful persuasion. “ Strict economists push for little or no action now, assuming that resources can be used to maximize economic conditions in the future and solutions will develop” (Hordeski, 2011, p. 2). While Hordeski says that economists have an optimistic view, opinions like these underestimate the urgency of renewable energy and the downplay seriousness of the sustainability movement.

Prevention of policy development regarding the use of fossil fuels and energy sources with negative environmental effects is delaying expansion of the green energy campaign. There are also policies that delay growth by argument of negative environmental effects. Policies are created prohibiting development of renewable energy technologies for reasons including large land use, ecological damage to plants and animals, or “ unsightly encroachment on the landscape and seascape” (Chen, 2011, p. 109). For

example, one solar installation exemplifying ‘unsightly encroachment’ and a large land use exists in Spain.

It consists of 2, 750 mirrors, covering 1. 5 square kilometers, or 0. 58 square miles. Despite the benefits of green energy, there are still other negative environmental factors it will contribute to. The data also brings up a question of ethics: Is the sacrifice of some natural habitat to technological installations necessary for the well being of our planet? It is subjects like these that influence whether policies are made in support of, or against current renewable energy technologies. The development of an effective renewable energy system is not a light task, but it is a task worth the effort.

Without green energy, mankind would go through numerous changes both environmentally and sociologically, all for the worse. Conversion to renewable energy sources has the potential of revitalizing our environment and ensuring a limitless energy supply. But, many issues must be taken into consideration when a movement, such as this, pertaining to the whole human race arises. While the advantages are clearly seen and supported, various factors exist that will prevent further development into a world of clean energy.

An initiative this large requires knowledgeable participants. This group does not yet entirely exist because of the difficulty in raising awareness and educating the entire global population. The human population will also have differing opinions on the subject matter of renewable energy and many ideas on how to handle an issue so large. There will be variations in government policy in different areas preventing an even global development of green

energy innovations. It is also difficult when the technological capabilities are not yet able to fully solve the issue at large.

Relying on fossil fuels must change soon in order to reverse the environmental effects and maintain the lifestyle of people around the globe. The transformation from dependency on fossil fuels to green energy is nothing short of a historic human revolution. References Armaroli, N. , & Balzani, V. (2010). Energy for a sustainable world: From the oil age to a sun-powered future. Weinheim, Germany: Wiley-VCH. Chen, F. F. (2011). An indispensable truth: How fusion power can save the planet. New York, NY; Dordrecht: Springer. Fuchs, E. F. , & Masoum, M.

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